

15. Notes on a Collection of Heterocera made by Mr. W. Feather in British East Africa, 1911-13. By Lt.-Col. J. M. FAWCETT *.

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(Plate I.†)

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The object of the third memoir on this subject is to describe a few more of the remaining forms of this collection in my possession, and to figure some of the forms described in my second memoir, published in 1916, of which I was unable to give figures from want of space on the plate.

The forms dealt with in the present memoir were taken at Kedai (altitude 2500 feet) and Masongaleni (altitude 3000 feet) in B. E. Africa, with the exception of a few specimens taken by Lady Colville at Meru, B. E. Africa. At the end I have described two new forms from India and Australia, which have been some time in my possession awaiting an opportunity of publication.

It will be noticed that among the forms from B. E. Africa there are a good many which are typical of the desert, of which *Euphiusa hermine*, *Ctenusa psamatha*, *Galactomoia berenice*, described in my former memoir, and *Cynisca thisbe*, in this one, are notable examples, which seem to occur along with darker, richer-coloured forms such as we should expect to meet with in a country of considerable rainfall. Not being acquainted with the district myself, and having no notes on the subject by Mr. Feather, I regret I cannot offer an explanation of this curious phenomenon.

I notice that my first memoir on this subject, published in

* Communicated by the SECRETARY.

† For explanation of the Plate see p. 250.

P. Z. S. 1915, has evoked a certain amount of criticism, and that from a quarter from which I did not expect it, as one of the writers was good enough to help me in the thankless task of working out my specimens amongst the vast material in the British Museum Collection, and to agree with me at the time in the conclusions I arrived at.

These criticisms refer to my descriptions of what I consider as new forms of Sphingidæ, and I would remark that until the preliminary stages and life-history of the specimens are known (and we are still in ignorance of them), I do not see how anyone, even the highest authority on the subject, can say as an absolute fact that such a specific name is a synonym of one already described. Such an assertion is merely a matter of opinion. In any case, it is desirable that undescribed forms from an extensive country like British East Africa, which has not been worked out to any great extent, should receive names in these days, when the Lepidoptera of each separate island in the Eastern Archipelago are being given distinct names as geographical forms—even when obviously belonging to well-known previously described species. The reader has only to refer to Seitz, 'Macrolepidoptera of the World,' to verify what I say. In making the above remarks I do not, for a moment, deprecate criticism; on the contrary, it is most interesting to me to read it, and, as I am a correspondent to the press on sporting subjects during the winter months, I get my fair share of it.

The figures in the accompanying plate are drawn by myself to represent the exact size. In this memoir B. M. stands for British Museum, and C. L. P. for 'Catalogue of the Lepidoptera Phalænæ,' by Sir George Hampson.

My best thanks are due to Lord Rothschild, Mr. Louis Prout, and Mr. J. H. Durrant, for their kindness and ever ready help in the British Museum.

HETEROCERA.

Family SYNTOMIDÆ.

249. *SYNTOMIS POLYXO*, sp. n. (Pl. I. fig. 10.)

Description.—♂. Black, shot with coppery suffusion in certain lights. Antennæ black with white tips; frons orange-yellow; collar black; patagia with orange-yellow stripes; metathorax with an orange patch; abdomen black, with six yellow bands. Fore wing with the following white diaphanous spots:—one below base of cell; an oblique diamond-shaped spot below middle of cell and vein 2; a spot in end of cell; an elongate spot above vein 6, and two spots between veins 3 and 5. Hind wing with a large basal spot between median nervure and inner margin, and a smaller one beyond end of cell, above vein 3.

The plan of markings is similar to that of *S. humeralis* Butler, from North Australia (C. L. P. i. pl. ii. fig. 15, p. 63); but this

form is much smaller, and the spots are white, and not yellow as in that species.

This is the smallest form of *Syntomis* that I am acquainted with, and the figure is slightly larger than natural size.

Habitat Kedai, 31st December, 1911, 2 ♀; 15th March, 1912, 1 ♂. Expanse, ♂ 13, ♀ 15 mm.

Family ARCTIADÆ.

Subfamily ARCTIANÆ.

250. *ESTIGMENE TENUISTRIGATA* Hampson, Ann. S. Afr. Mus. ii. p. 54 (1900); C. L. P. pl. xlviii. fig. 16.

Habitat. Masongaleni, 18th April, 1911, 1 ♀.

250 *a*. *ESTIGMENE LEMNISCATA* Distant, A. M. N. H. (7) i. p. 116 (1898); C. L. P. pl. xlvii. fig. 20.

Habitat. Meru, B. E. Africa, taken by Lady Colville, 1 ♂.

This specimen is much more heavily marked, as regards the black bands, than the figure above quoted, and, moreover, has a black band along the costa.

250 *b*. *ESTIGMENE LINEA* Walker, Cat. iii. p. 671 (1855); C. L. P. pl. xlvii. fig. 2.

Habitat. Meru, B. E. Africa, taken by Lady Colville, 2 ♂.

These specimens agree fairly well with the figure in C. L. P., but one example is much lighter in tone than the other, whilst both have more heavy black markings.

251. *TERACOTONA SUBTERMINATA* Hampson, C. L. P. iii. p. 471, pl. l. fig. 16 (1901).

Habitat. Masongaleni, 18th April, 1911, 1 ♂.

Family HYPSIDÆ.

252. *BITHRA AGANICE*, sp. n. (Pl. I. fig. 11.)

Description.—♀. Head and thorax pale grey-brown; antennæ black, and pectinate for half the length, filamentous thence to tip. Two black spots on collar, two on each of the patagia, and one on metathorax. Abdomen pale orange, with a dorsal row of black spots on first three somites, and a lateral series on each somite. Fore wing pale grey-brown, with the following black points: two basal; two subbasal, one of which is near the base of costa, and one below base of cell; two antemedial, one of which is below cell, and one above vein 1; one in cell before middle, and one in interspaces 3, 4, and 6, near base, and beyond cell. Hind wing dull yellow. Underside similar to upperside, unmarked.

This form is nearest to *Bithra aganois* Felder, which has only one basal black spot and one in cell.

Habitat. Kedai, 7th January, 1912, 1 ♀. Expanse 36 mm.

Family NOCTUIDÆ.

Subfamily AGROTINÆ.

253. CLADOCEROTIS CENEUS, sp. n. (Pl. I. fig. 12.)

Description.—♂. Head, thorax, abdomen, and fore wing pale red-brown. Head and thorax densely covered with thick long hair; abdomen with lateral tufts of hair. Fore wing with the veins, orbicular and reniform pale ochreous; reniform defined outwardly by black lines. Interior of cell dark red-brown, with a black line below costa from base to middle. Claviform very elongated and black, from base to beyond middle. An irregular series of black wedge-shaped spots subterminally between veins 4, 5, and 6, double the size of those between the other veins. A fine black terminal line. Cilia ochreous on both wings. Hind wing with the basal area ochreous and the terminal area pale fuscous.

This form seems to be allied to *C. optabilis* Boisd., from Europe, but is larger than the figure in C. L. P. and much darker, the claviform is black, not ochreous defined by black, the marginal spots are irregular, and the hind wings ochreous and pale fuscous instead of white as in that species.

Habltat. Meru, taken by Lady Colvile, 2 ♂, 1 ♀. Expanse 36 mm.

The ♀ specimen is darker in colour, the markings are more ill-defined, and the antennæ are not so highly pectinated.

254. POROSAGROTIS CAFFRA Hampson, C. L. P. iv. p. 658, pl. lxxvii. fig. 29 (1903).

Habitat. Meru, taken by Lady Colvile, 1 ♀.

255. ADISURA ATCINSONI Moore, P. Z. S. 1881, p. 368, pl. xxxvii. fig. 6.

Habitat. Kedai, 6th March, 1912, 1 ♂.

This form is very variable, and the specimen under notice has darker hind wings than some specimens in the B. M. from British East Africa.

256. CHLORIDEA OBSOLETA Fabricius, Ent. Syst. 3, i. p. 546 (1793).

Habitat. Kedai, 16th March, 1912, 1 ♂.

Formerly known as *armigera* Hübner, Samml. Eur. Schmett. fig. 370 (1827).

Subfamily HADENINÆ.

257. ODONTESTRA AVITTA, sp. n. (Pl. I. fig. 15.)

Description.—♂. Head, thorax, and abdomen pinkish brown. Fore wing pinkish brown, chestnut in the medial area. Sub-basal and antemedial lines represented by a single thick black

line. Claviform short and thick, black. A black line on inner margin from base below vein 1 to antemedial line. No ochreous white fascia on medial part of inner margin. Orbicular and reniform large, extending over costa, pinkish defined outwardly by indistinct ochreous. Postmedial line excurved round reniform and thence straight to inner margin—a thick black line. An indistinct subapical spot below costa. Hind wing white with some ochreous irroration near the apex. Underside pale ochreous, with discocellular spots and diffused postmedial lines.

This form differs from *vittigera* Hampson, from Mashonaland and Natal, in being without the ochreous-white fascia on medial part of inner margin, that part of the wing being concolorous with the remainder; also in the following characters:—the orbicular and reniform are larger and spread out over the costa, and are pinkish in colour; the ante- and postmedial lines are thick black single lines, not double lines filled in with ochreous; the subterminal area beyond the postmedial line is plain pinkish brown, without a trace of any marks save a small subapical spot below the costa.

It also differs from *albirivitta* Hampson (C. L. P. v. p. 206) in being without the whitish fascia above the claviform, which species is also recorded from British East Africa.

Habitat. Kedai, 8th December, 1911, 1 ♂. Expanse 30 mm.

Subfamily ACRONYCTINÆ.

258. *PERIGEIA CAPENSIS* Guén. Noct. i. p. 213 (1852).

Habitat. Masongaleni, 22nd June, 1911, 1 ♂.

259. *LAPHYGMA EXEMPTA* Walker, Cat. x. p. 355 (1856).

Habitat. Kedai, 1911, 24th November, 1 ♂; 25th November, 2 ♂.

260. *PARASTICTIS OXYLUS*, sp. n. (Pl. I. fig. 22.)

Description.—♂. Head, thorax, abdomen, and fore wing dark red-brown with black-brown markings. Fore wing: subbasal and antemedial lines only represented by strigæ on the costa. Orbicular and reniform defined by fine black lines with a dark shade on and below the costa between them; an irregular dentate postmedial line angled inwardly above veins 4 and 6, and outwardly at veins 4 and 3, with some black lines running from it to the outer margin. A black band starting from base under vein 1, angled up to vein 2, and running below it to postmedial line, and thence on to outer margin. Hind wing pale ochreous basally and fuscous towards the apex. Cilia of fore wing black and ochreous chequered, of hind wing whitish. Underside pale ochreous.

Habitat. Kedai, 19th November, 1911, 1 ♂. Expanse 34 mm.

261. *PARASTICTIS LYSIS*, sp. n. (Pl. I. fig. 25.)

Description.—♂. Head and thorax bright ferruginous, abdomen reddish ochreous. Fore wing bright ferruginous, the subterminal area beyond the postmedial line pale ochreous. Orbicular and reniform defined outwardly by fine black lines and with a dark shade below the costa between them. Subbasal and antemedial lines obsolete. A black line from the base of interspace 1 to middle, where it is recurved upwards and then inwards. Another black line from base below vein 1, with a small black spot on inner margin below it. Some black streaks with bright red edges between the veins on the subterminal area. Postmedial line highly dentate. Hind wing pale ochreous, darker towards the termen. Underside pale ochreous, with fuscous discocellular spots and diffused postmedial bands.

Habitat. Kedai, 1911, 10th November, 1 ♂; 18th November, 1 ♂. Expanse 34 mm.

Of the large number of species (39) of the genus *Parastictis* given in C. L. P. vii., only one is recorded from Africa, *nigricostata* Hampson, which is a totally differently-coloured insect.

The first of the forms under notice may always be known by the prominent curved black band below vein 1, and the second by its bright ferruginous colour.

Subfamily SARROTHRIPINÆ.

262. *GIAURA ARETHUSA*, sp. n. (Pl. I. fig. 14.)

Description.—♂. Head, thorax, and abdomen grey. Fore wing grey, minutely irrorated and striated with fuscous. Subbasal line represented by a V-shaped striga on the costa. Antemedial line represented by another costal striga which gradually becomes obsolescent in the cell, with a dark shade beyond it. Postmedial line outwardly oblique to vein 4, then bent inward, and becoming obsolete before reaching the inner margin. A highly dentate submarginal line with diffused fuscous shading beyond it, from apex to near tornal angle, where there is a black spot before it. A fine marginal black line. Cilia grey. Hind wing pale ochreous at the base, terminal area fuscous black. Cilia ochreous. Underside of fore wing ochreous, thickly irrorated with fuscous towards the margin: hind wing white with a black subterminal band.

Habitat. Kedai (date not recorded), 1 ♂. Expanse 34 mm.

Subfamily ERASTRIANÆ.

263. *OZARBA SUBTERMINALIS* Hampson, P. Z. S. 1910, p. 407; C. L. P. x. pl. clxii. fig. 1.

Habitat. Kedai, 27th November, 1912, 1 ♂.

264. *OZARBA VARIA* Walker, Cat. xxxiii. p. 772 (1865).

Habitat. Kedai, 5th January, 1912, 1 ♂.

This specimen has orange hind wings in contradistinction to

some specimens in the B. M. Collection ; but the species is exceedingly variable.

265. *OZARBA SINUA* Hampson, C. L. P. x. p. 414, pl. clx. fig. 31 (1911).

Habitat. Kedai, 18th November, 1911, 1 ♂.

This specimen represents a very light form of the species.

266. *OZARBA ABSCISSA* Walker, Cat. xv. p. 1764 (1858).

Habitat. Kedai, 9th December, 1911, 1 ♂.

Subfamily ACONTIANÆ.

*148. *LEOCYMA CANDACE* Fawcett, P. Z. S. 1916, p. 712. (Pl. I. fig. 20.)

As promised in my former paper, quoted above, I am now able to give a figure of this species, which the reader is requested to compare with the woodcut figure of *camilla* Druce, in C. L. P. xi. p. 663, and that of *discophora* Hampson, pl. cxc. fig. 19.

Subfamily CATOCALINÆ.

*152. *CENUSA RECTILINEA* Fawcett, P. Z. S. 1916, p. 713. (Pl. I. fig. 31.)

A figure is here given of the typical form : no. 2 form *psamatha* was figured in my memoir published in 1916 (P. Z. S. 1916, Fawcett, Pl. I. fig. 21).

*162. *CORTYTA MINYAS* Fawcett, P. Z. S. 1916, p. 715. (Pl. I. fig. 17.)

CORTYTA GRISEACEA Fawcett, P. Z. S. 1916, p. 718. (Pl. I. fig. 18.)

Figures are now given of the above species. As both *minyas* and *griseacea* have been taken in December 1911 at Kedai, they can hardly be seasonal forms of the same species, and I am now of the opinion that they are distinct forms.

267. *PLECOPTERODES MODERATA* Wallengren, Wien. Ent. Mon. iv. p. 174 (1860).

Habitat. Masongaleni, 22nd April, 1911, 1 ♂.

Subfamily NOCTUINÆ.

*181. *PLECOPTERA POLYMNIA* Fawcett, P. Z. S. 1916, p. 722. (Pl. I. fig. 23.)

A figure is here given of this form. The reader has only to compare it with the figure of *polymorpha* Hampson, P. Z. S. 1916, pl. ii. fig. 3, to see how it differs from Hampson's species, which is clearly a desert form.

* These numbers refer to my paper in P. Z. S. 1916, p. 707 *et seq.*

268. *BREVIPECTEN ICARUS*, sp. n. (Pl. I. fig. 24.)

Description.—♂. Head and thorax grey; abdomen ochreous. Fore wing with the basal half grey, the costa tinged with ferruginous. Subbasal line represented by two black spots below the costa and on the median nervure. Antemedial line very faint and indistinct. A square black patch before end of cell, with two small black spots above it on costa, separated by a patch of ferruginous suffusion, and with a patch of ferruginous suffusion below it on interspaces 1, 2, and 3, before the postmedial line. Reniform large, represented by a grey patch, beyond which the postmedial line is angled outwardly at vein 6, and is then evenly curved inwards to inner margin. A black patch on costa before apex with ferruginous suffusion before it. Subterminal area pale brown, with a marginal row of indistinct wedge-shaped spots between the veins. Hind wing ochreous, darker towards the margin. Cilia ochreous. Underside: medial areas of both wings grey, subterminal area pale fuscous; costa ochreous, with some black strigæ on that of hind wing, and a discocellular spot.

Habitat. Kedai, 28th November, 1911, 1 ♂. Expanse 32 mm.

Genus *CYNISCA*, nov.

Type, *C. thisbe*, sp. n.

Allied to *Calpe*. Proboscis fully developed. Palpi long, porrect, the 2nd and 3rd joints fringed with long hair above and below. Antennæ ciliate; metathorax with slight tufts of hair, which also appear on dorsum of abdomen on first three somites. Costa of fore wing straight, not arched. Apex rectangular, not acute. Outer margin crenulate, evenly rounded. Inner margin with a very pronounced lobe at middle, and a smaller lobe at tornal angle. Venation as in *Calpe*.

269. *CYNISCA THISBE*, sp. n. (Pl. I. fig. 13.)

Description.—♀. Head, thorax, and abdomen ochreous white. Antennæ red. Fore wing pale brown, shading into pale purple on the centre lobe and the area above it, and with a purple shade on outer margin. Antemedial line red-brown from costal nervure to inner edge of lobe, with a short line beyond it. A medial line from end of cell to outer edge of lobe, where it is bent inwards and becomes double. A very indistinct dentate postmedial line from before apex to outer lobe. Cilia pale brown. Hind wing white, with a pale ochreous shade on the veins on outer margin. Cilia white. Underside ochreous white, marked only by the postmedial band of the upperside showing through.

Habitat. Kedai, 9th March, 1913, 1 ♀. Expanse 42 mm.

This is clearly a well-marked form of the desert.

270. *PTERONYCTA CERVICORNIS*, sp. n. (Pl. I. fig. 21.)

Description.—♂. Head, thorax, abdomen, and fore wing pale pinkish grey. Fore wing: subbasal and antemedial lines only

indicated by a couple of black spots. Orbicular stigma, a fine black point with a fine black line round it. Reniform indistinct. Postmedial line represented by a double row of black points bent in to inner margin. A broad red-brown band from base along median nervure to end of cell, where it is bent up into a tooth, then curving down to outer margin at vein 4. The area below this band reddish towards base. Some small ferruginous stripes between veins 3, 4, and 5 submarginally. Hind wing grey, the terminal area fuscous. Cilia ochreous. Underside pale ochreous, with a fine striga at end of cell of fore wing.

Habitat. Kedai, 13th January, 1913, 1 ♂. Expanse 40 mm.

I have named this form *cervicornis*, from a fancied resemblance of the broad red band to a stag's antler.

The only species in the B. M. Collection which seems to be near this form is the recently described *Pteronycta fasciata* Hampson, from Zomba in Nyassaland, which is a much larger insect.

Subfamily HYPENINÆ.

*189. *HYPENA JUSSALIS* Walker.

Habitat. Kedai, 1911, 29th December, 1 ♂; 30th December, 1 ♂.

HYPENA STRIGATA Fabricius.

Habitat. Kedai, 25th November, 1911, 1 ♂; 3rd January, 1912, 1 ♂.

In my former paper I mentioned that the specimens of *Hypena* in the Feather collection represent two forms, a grey and a brown form. I now find that the grey form is *jussalis* Walker, and the brown form *strigata* Fabricius.

Family LYMANTRIADÆ.

271. *CASAMA VILIS* Walker.

Habitat. Masongaleni, 25th June, 1911, 1 ♀.

Specimens of this species in the B. M. Collection are nearly all from Ceylon and Arabia, but there are a few from the Red Sea littoral which agree with this specimen. Clearly a desert form.

272. *RHODESANA MINTHA*, sp. n. (Pl. I. fig. 19.)

Description.—♂. Head, thorax, abdomen, and fore wing chestnut red-brown. Antennæ bipectinate. Abdomen with dorsal tufts. Fore wing thickly irrorated and striated with black. A subbasal black line from costa to vein 1. Antemedial line irregularly waved and bent inwards on vein 3, and thence more or less straight to inner margin. A line of wedge-shaped red-brown submarginal spots between the veins before termen. Cilia red-brown, whitish at the extremities of the veins. Hind wing ochreous, irrorated with red-brown atoms, with a somewhat indistinct medial line across the disc. Underside ochreous, with indistinct brown medial band.

Habitat. Masongaleni, 27th March, 1911, 1 ♂; Kedai, 27th November, 1912, 2 ♂. Expanse 32 mm.

This form is nearest to *R. crenulata* Bethune Baker, but is much smaller and redder than that species. It also differs in the postmedial line being angled in on vein 3, and there being a medial line across the disc of the hind wing.

273. *HETERONYGMIA AURELIA*, sp. n. (Pl. I. fig. 16.)

Description.—♂. Head and thorax golden yellow, abdomen ochreous. Antennæ bipectinate. Palpi long, thickly covered with long hair. Fore wing golden yellow; no antemedial lines. Three oblique lines, red-brown, and leading in the shape of a V from the costa to a dark red-brown shade at end of cell. A narrow waved oblique postmedial line from costa just before apex to middle of inner margin. A subterminal line of black points between the veins. Cilia reddish yellow. Hind wing ochreous; a fuscous spot at tornal angle with a fuscous striga above it, and three fuscous discal spots between veins 3, 4, 5, and 6.

Underside: fore wing bright ochreous, with a fuscous band on discocellulars, and a thicker fuscous postmedial band than that on the upperside; hind wing bright ochreous, with medial band and discal spots as on the upperside.

Habitat. Meru, B. E. Africa, taken by Lady Colville. Expanse 38 mm.

There are no specimens of this genus in the B. M. Collection, but there is a figure of *Heteronygmia stigmatica* Holland, from Gaboon, which appears to be near this species, but it has no black oblique postmedial line as in this species.

274. *EUPROCTIS RUBRICOSTA*, sp. n. (Pl. I. fig. 7.)

Description.—♂. Head, thorax, and wings pure shining white; antennæ bipectinate and ochreous, base of shaft white; legs thickly covered with long white hair. Abdomen with the first three somites white and the terminal three golden yellow. Underside white, with a red-brown band along the costa from base to just before apex.

Habitat. Masongaleni, 1911, 28th May, 1 ♂; 25th December, 1 ♀. Expanse 32 mm.

274 a. *LACIPA ALBULA*, sp. n. (Pl. I. fig. 8.)

Description.—♂. Head, thorax, and wings pure shining white. Antennæ ciliate. Abdomen golden yellow with the exception of the first somite and the anal extremity, which are white. Fore wing unmarked, save for a shade on the costa beyond cell, and on inner margin before tornal angle. Eight black points on the margin between the veins, seven of which also appear on the hind wing. Underside: fore wing with the basal and internal area white, the costa and half of cell occupied by a red-brown band, and short reddish bands between the veins distally, above vein 3. The black marginal points more distinct than on the upperside.

Habitat. Masongaleni, 1911, 24th March, 1 ♂; 29th December, 1 ♂. Expanse 24 mm.

This form is near to *Lacipa searpunctata* Distant, but is without the black spots and yellow ante- and postmedial lines.

Family GEOMETRIDÆ.

Subfamily BOARMIANÆ.

275. XYLOPTERYX ARCUATA Walker.

Habitat. Masongaleni, 21st June, 1911, 1 ♂.

276. HONORANA EREBARIA Guén.

Habitat. Kedai, 30th December, 1911, 1 ♀.

277. HYLEMERA LEPTA, sp. n. (Pl. I. fig. 29.)

Description.—♂. Head and pectus yellow. Thorax and first three somites of abdomen white above, yellow below, and colorous with the terminal somites which are yellow. Fore wing white; the costa fuscous, and a broad apical fuscous fascia the inner margin of which is angled outwardly between veins 3 and 4. Hind wing white, with a very narrow fuscous border, which is almost linear, between veins 2 and 6.

Underside as on upperside.

Habitat. Kedai, 1911, 1st December, 1 ♂; 12th December, 1 ♀. Expanse 36 mm.

This species differs from *doleris* Plötz, *accra* Swinhoe, and *ansorgei* Warr., from Uganda, in the black band of the hind wing being narrow and continuous, the above forms having a large black spot on the apex of the hind wing: from *dexitheia* Druce, it differs in not having the inside of the fascia of the fore wing evenly curved, and a black spot below apex of hind wing.

278. EURRANTHIS PENNIGERARIA Hübner.

Habitat. Mern, B. E. Africa, taken by Lady Colvile.

Subfamily ACIDALIINÆ.

279. ACIDALIA SAGITTILINEA Warr. Nov. Zool. iv. p. 219 (1897).

Habitat. Kedai, 8th April, 1912, 1 ♂.

280. MICROLOXIA RUFICORNIS Warr.

Habitat. Kedai, 29th December, 1912, 1 ♀.

Subfamily GEOMETRINÆ.

281. TRIMETOPIA ÆTHERARIA Guén.

Habitat. Kedai, 1911, 4th January, 1 ♀; 23rd November, 1 ♂; 25th November, 1 ♀; 17th December, 1 ♂.

One of the most beautiful forms of Geometridæ.

282. *HETEROCRITA METIS*, sp. n. (Pl. I. fig. 30.)

Description.—♀. Head pinkish brown, the vertex between the antennæ white. Antennæ white above, pink beneath. Thorax and wings bright grass-green. Abdomen pale pinkish brown above, ochreous on the under surface, the first two somites bright pinkish. Wings unmarked except for a bright pinkish-brown marginal line, inside which are two minute white spots defined inwardly by pinkish brown between veins 5 and 7, and a large one of the same colour at tornal angle of each wing. The inner margin of the hind wing also defined by a pinkish-brown line. Cilia pale pink. Underside glaucous grey.

Habitat. Kedai, 20th February, 1912, 1 ♀. Expanse 30 mm.

This form is near to, and may, perhaps, be a local race of *Heterocrita depressa* Prout, from which it differs in (1) having no discoidal spots, (2) the spots at the tornal angles of both wings are much larger, and (3) the abdomen is much more pink-coloured.

283. *EURYTHECODES FLAVEDINARIA* Guén.

Habitat. Meru, B. E. Africa, taken by Lady Colville.

Mr. Prout informs me that this is a common and very variable species, but I have only one specimen of it.

Family LIMACODIDÆ.

284. *THOSEA GANALE* Pagenstecher.

Habitat. Kedai, 1st December, 1911, 1 ♂.

285. *THOSEA UNDOSA*, sp. n. (Pl. I. fig. 6.)

Description.—♀. Head, thorax, and abdomen pale ochreous brown. Fore wing with the basal area as far as the postmedial line red-brown, the distal area beyond it pale ochreous brown. Subbasal and antemedial lines absent; a black point at end of cell. A broad, dark brown oblique postmedial line, waved and irregular, from costa to inner margin at middle. A fine dark brown subterminal line from costa to tornal angle, where it almost meets the black marginal line. Cilia pale brown in both wings. Hind wing ochreous brown, with a brown marginal line. Underside ochreous brown, irrorated with red-brown atoms.

Habitat. Kedai, 4th December, 1911, 1 ♀. Expanse 30 mm.

This form is nearest to *T. cana* Walker (= *transversata* Walker) from India, in which the dark line is antemedial, less oblique, and straight without waves; the subterminal line is straight, and not curved, and the basal area is not so dark as in this species.

286. *THOSEA PERSEIS*, sp. n. (Pl. I. fig. 4.)

Description.—♂. Head, thorax, abdomen, and fore wing red-brown minutely irrorated with black atoms. Subbasal and ante-

medial lines absent. A white point at end of cell. A black highly-waved postmedial line from costa before apex to middle of inner margin, which is inwardly diffused into black patches below end of cell, and from vein 2 to inner margin. This line is outwardly defined by a prominent white line, with dark shades beyond it between veins 2 and 3 and 6 and 7. An irregularly curved subterminal line followed by a black marginal line. Cilia of both wings red-brown. Hind wing ochreous. Underside ochreous, with indications of a postmedial line.

Habitat. Masongaleni, 30th April, 1911, 1 ♂. Expanse 30 mm.

This form is nearest to *T. syrtis* Schaus, from Salisbury and West Africa. It differs in the lines being waved and not straight, and that species has not the dark patches inside the postmedial line. When at the B. M. I submitted the above specimens to the inspection of Lord Rothschild, who said the forms were unknown to him, and differed from described forms mainly in their undulating lines.

287. *THOSEA CHLORIS*, sp. n. (Pl. I. fig. 5.)

Description.—♂. Head and thorax red-brown beneath, fiery orange dorsally. Abdomen red-brown, with some fiery-orange hairs on the dorsum. Tibiæ fiery orange, with long red-brown hairs to the tarsi. Fore wing red-brown with pinkish suffusion. A white point at end of cell. No subbasal or antemedial lines. Postmedial line dark brown, from costa before apex to middle of inner margin. Subterminal area paler. Subterminal line from costa before apex to outer margin at vein 3. Two whitish spots between veins 2 and 3: one outside the postmedial line, and one on inside of subterminal line, near its junction with outer margin. Hind wing red-brown paling to ochreous at base. Underside pale red-brown unmarked.

Habitat. Ashanti, W. Africa (*A. Norris*), 1 ♂. Expanse 30 mm.

This form is nearest to *T. rara* Swinhoe, from Thyetmyo. Burma, but is darker red, and has fiery orange head and thorax which *rara* has not. In the B. M. Collection there is an unnamed specimen from the Gold Coast, which may or may not be referable to this species.

288. *COSUMA MARGINATA* Holland.

Habitat. Masongaleni, 7th April, 1911, 1 ♂.

This form seems near to the following which I have from W. Africa.

289. *COSUMA RUGOSA* Walker.

Habitat. Ashanti, W. Africa (*A. Norris*), 1 ♂.

290. *APLUDA INCINATA* Hampson.

Habitat. Masongaleni, 1911, 2 ♂.

291. GAVARA VELUTINA Walker.

Habitat. Kedai, 1912, 16th March, 1 ♂ ; 10th December, 1 ♀.

I identified these specimens in the B. M. as above ; there are however, two forms of Limacodidae which have passed as "*velutina*," and are given by Hampson in Faun. Brit. Ind., Moths, i. pp. 382 & 398, which are very different-looking insects from the present form.

292. ALTHA LACIDES Druce.

Habitat. Masongaleni, 1911, 25th December, 1 ♂ ; 2nd April, 1 ♀.

Family ARBELIDÆ.

293. ARBELODES TETRASTICTA Hampson.

Habitat. Kedai, 12th January, 1912, 1 ♂.

This specimen only differs from the specimen in the B. M., which is also from British East Africa, in the body being somewhat shorter, and the pale markings of the wings being larger.

Family COSSIDÆ.

*228. DUOMITUS PINDARUS Fawcett, P. Z. S. 1916, p. 733. (Pl. I. fig. 27.)

I am now able to give a figure of this species, which was omitted from my last paper from want of space in the plate.

Comparison of figure 27 with that of *D. steniptera* Hampson, P. Z. S. 1916, plate ii. fig. 31, will show how much it differs from that species both in colour and size.

Family THYRIDIDÆ.

294. RHODONEURA BRYAXIS, sp. n. (Pl. I. fig. 9.)

Description.—♀. Head, thorax, and abdomen ochreous suffused with rufous. Fore wing reddish ochreous profusely striated with rufous. Antemedial line indistinct. Postmedial line bifid on the costa, originating from two costal spots, and bent in obliquely on veins 2 and 3. Subterminal line very prominent, from costa before apex, angled outwards to outer margin at veins 4 and 2. Hind wing with a medial double line, a postmedial line, and a subterminal line angled to outer margin at veins 4 and 2.

♂. Smaller and paler in coloration, being pale ochreous. The postmedial line on the fore wing and the medial line on the hind wing double and filled in with rufous ; otherwise as in ♀.

Habitat. Kedai, 1911, 26th November, 1 ♂ ; 15th December, 1 ♂. 1912, 13th January, 1 ♀ ; 12th March, 1 ♀ ; 8th December, 1 ♂. Expanse, ♂ 28 mm.; ♀ 30 mm.

This form differs from all the specimens of *Rhodoneura* in the B. M. Collection in its prominent subterminal line angled to outer margin at veins 4 and 2.

295. *DYSODIA INTERMEDIA* Walker.

Habitat. Kedai, 5th January, 1912, 1 ♂.

The above example agrees with B. E. African specimens in the B. M. Collection which were collected at Taveta by Rogers in October and at the end of December, and named *flavillula* by Warren, and which Sir George Hampson evidently regards as forms of Walker's South African species.

Family PYRALIDÆ.

Subfamily CRANBINÆ.

296. *SURATTHA RUFISTRIGALIS*, sp. n. (Pl. I. fig. 3.)

Description.—♂. Head, body, and legs ferruginous. Fore wing brownish ochreous, ferruginous on costa. Highly dentate medial and postmedial ferruginous lines from costa to inner margin, angled outwardly at vein 5. A ferruginous terminal line with dark wedge-shaped spots between the veins. Median nervure and inner margin defined by bright ferruginous bands; the interspaces between the veins defined with fuscous irroration. Hind wing ochreous, with ferruginous irroration in the subapical area: cilia ochreous.

Habitat. Kedai, 18th November, 1911, 1 ♂. Expanse 24 mm. The figure is slightly larger than natural size.

This form is nearest to *S. africalis* Hampson, but has no dark medial area; the postmedial line is more dentate, and the coloration is brighter ferruginous.

297. *ANCYLOLOMIA SIMPLELLA* De Jaan.

Habitat. Meru, B. E. Africa, taken by Lady Colville, 1 ♀.

298. *ANCYLOLOMIA PECTINIFERA* Hampson.

Habitat. Kedai, 9th January, 1913, 1 ♀.

Also recorded from Somaliland.

299. *ANCYLOLOMIA CHRYSOLINEALIS*, sp. n. (Pl. I. fig. 2.)

Description.—♂. Head, thorax, abdomen, and fore wing very pale ochreous. Fore wing with eight golden stripes in the interspaces between the veins in the distal area beyond the cell, of which those in interspaces 1 and 7 are shorter than the remainder. Each golden stripe is defined beneath by a yellow fascia with streaks of black scales on it. A minutely dentate silvery submarginal line on which are some dusky points. Cilia silvery. Hind wing pure white; cilia white. Underside as on upperside, with silvery suffusion.

Habitat. Masongaleni, 26th December, 1911, 1 ♂. Expanse 34 mm.

This form is nearest to *A. chrysographella* Kollar, from India,

but is distinguished by having the golden stripes of the fore wing confined to the distal area, and it is considerably larger than *chrysographella*.

300. *ANCYLOLOMIA GRACILIS*, sp. n. (Pl. I. fig. 1.)

Description.—♂. Head, thorax, and abdomen pale ochreous brown. Fore wing bright ochreous, unmarked; the interior marginal area below vein 1 thickly irrorated with fuscous scales. A series of black points at the end of the veins on the outer margin. Hind wing silvery grey, with ochreous suffusion on the subapical area. Cilia ochreous. Underside as on upperside, with silvery suffusion.

Habitat. Meru, B. E. Africa, taken by Lady Colville, 1 ♂. Expanse 28 mm.

There is a series of unnamed specimens in the B. M. Collection, which appear to be very near this species.

Subfamily ANERASTIANÆ.

301. *EMATHEUDES LENTISTRIGALIS* Hampson.

Habitat. Masongaleni, 6th June, 1912, 1 ♀.

New Forms from other Regions.

Family LYMANTRIADÆ.

302. *ANTHELA NIGRISTIGMA*, sp. n. (Pl. I. fig. 28.)

Description.—♂. Vertex of head and collar ferruginous; thorax pale red-brown; abdomen ochreous. Wings pale ochreous with golden suffusion in certain lights. Base of fore wing and internal area of hind wing clothed with long pale red-brown hair. Fore wing with a round black spot in centre of cell, and a larger quadrate black spot on discocellulars. A somewhat indistinct line of submarginal black points on the veins in the subterminal area. Hind wing with a quadrate discocellular black spot, and a submarginal series of black points on the veins.

Underside concolorous with upperside, with an additional black spot in the cell of the hind wing which does not appear on the upperside, and all the black spots have whitish centres. Cilia ochreous.

Habitat. Townsville, Queensland, Australia, August 1913, 1 ♂. Expanse 36 mm.

The above specimen was sent to me by Mr. Feather in a small collection from Australia. In the B. M. Collection there is a series of unnamed specimens which may, or may not, be referable to this species. In some of them the cellular spots are a good deal larger and the submarginal series more distinct. This species is near to *ocellata* Walker, which has the submarginal spots black and prominent.

Family NOCTUIDÆ.

Subfamily CATOCALINÆ.

303. NYCTIPAO ACUTA, sp. n. (Pl. I. fig. 26.)

Description.—♂. Head, thorax, and abdomen fuscous brown.

Fore wing with the basal two-thirds very dark red-brown, the subterminal third pale red-brown with pinkish suffusion, profusely striated with red-brown. Apex of fore wing acute. Antemedial line obsolescent, and hardly distinguishable. An inverted comma-shaped discoidal whorl with bilobate head defined by black, and its head by silvery blue with a red-brown patch beyond it; its centre reddish brown with an ochreous line on inner side of tail. Medial line black, arising below the costa, excurved round the discoidal whorl, and angled inwards below it on vein 2, and then erect to inner margin. This line is defined outwardly by a pale round ring beyond the whorl. Postmedial line curved, starting from a large triangular black patch below the costa and continued as an indistinct fuscous line to below vein 2, where it forms the outer edge of the basal dark area to inner margin. This line is defined outwardly by a narrow ochreous line from costa to below vein 7, and thence to inner margin by an indistinct line of the ground-colour. Subterminal line obsolete. Hind wing with the basal two-thirds dark red-brown, the terminal third pale red-brown with pinkish suffusion; the postmedial line represented by double fine lines of the ground-colour; subterminal line represented by an indistinct, waved, subterminal shade. Cilia pale red-brown.

Underside of both wings fuscous brown; fore wing with a white postmedial patch from below costa to vein 6, where it is broadest. A subterminal series of white oblong spots, incurved in interspace 4, excurved in interspace 3.

♀. Similar to ♂, but the comma-shaped discoidal whorl is somewhat larger, and there is a pale ochreous postmedial patch from costa to just above vein 6, diffused outwardly.

This form has, I think, been overlooked by later writers; I say this because I cannot find amongst the described forms in C. L. P. vol. xii. (published in 1913) a description and figure that absolutely tallies with my specimens. The nearest to it is *Nyctipao gemmans* Guén. It differs from all the forms of *Nyctipao* which I have seen in having the apex of the fore wing acute. The form *crepuscularis* Linn. is nearest to it in this respect, but its outer margin is highly crenulate, whereas in this species it is evenly rounded. From *gemmans* in particular it differs in the absence of the white postmedial line, which is represented by a short ochreous striga below the costa.

Habitat. Hills E. of Toungho, Burma, May 1896, 1 ♂, 1 ♀. Expanse 74 mm.

The above specimens were taken by some native Lepcha collectors sent to the Burma hill-country to collect Lepidoptera by Mr. F. Möller, Mr. J. Apcar, and myself.

EXPLANATION OF THE PLATE.

Fig.

1. *Ancylolomia gracilis*, ♂.
2. *Ancylolomia chrysolinealis*, ♂.
3. *Surattha rufistrigalis*, ♂.
4. *Thosea perseis*, ♂.
5. *Thosea chloris*, ♂.
6. *Thosea undosa*, ♀.
7. *Euproctis rubricosta*, ♂.
8. *Lacipa albula*, ♂.
9. *Rhodoneura bryaxis*, ♀.
10. *Syntomis polyxo*, ♂.
11. *Bithra aganice*, ♀.
12. *Cladocerotis æneus*, ♂.
13. *Cynisca thisbe*, ♀.
14. *Giaura arethusa*, ♂.
15. *Odontestra avitta*, ♂.
16. *Heteronygmia aurelia*, ♂.

Fig.

17. *Cortyta minyas*, ♂.
18. *Cortyta griseacea*, ♂.
19. *Rhodesana mintha*, ♂.
20. *Leocyma candace*, ♂.
21. *Pteronycta cervicornis*, ♂.
22. *Parastichtis oxyllus*, ♂.
23. *Plecoptera polymnia*, ♀.
24. *Brevipecten icarus*, ♂.
25. *Parastichtis lysis*, ♂.
26. *Nyctipao acuta*, ♂.
27. *Duomitus pindarus*, ♂.
28. *Anthela nigristigma*, ♂.
29. *Hylemera leptæ*, ♂.
30. *Heterocrita metis*, ♀.
31. *Ctenusa rectilinea*, ♂.